

ABSTRACT OF THE DISCLOSURE

Marrow stromal cells (MSCs) are adult stem cells from bone marrow that can differentiate into multiple non-hematopoietic cell lineages. Colonies of human MSCs were shown to contain both small, rapidly self-renewing stem cells (RS cells) and large, more mature cells (mMSCs). Samples enriched for RS cells had a greater potential for multipotential differentiation than samples enriched for mMSCs. Also, RS cells have a series of surface epitopes and expressed proteins that can be used to differentiate RS cells from mMSCs. The results suggest that it will be important to distinguish the two major sub-populations of MSCs in defining their biology and their potentials for cell and gene therapy.

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